

Contents

- [News](#) – Updates & meetings
- [Spike2](#) – Calculate mean of channel data
- [Signal](#) – Control of 3304 current stimulator
- [Spike2 Script](#) – Merge & append files
- [Signal Script](#) – Multiple file auto-average
- [Did you know...?](#) – Lock y axes
- [Recent questions](#) – Running Spike2 using Parallels

News

Meetings and events

[Australian Neuroscience Society 2008](#)

Booth 14
Hobart, Tasmania
January 27th – 30th 2008

[Biophysical Society 2008](#)

Booth 317
Long Beach, California
February 3rd – 7th 2008

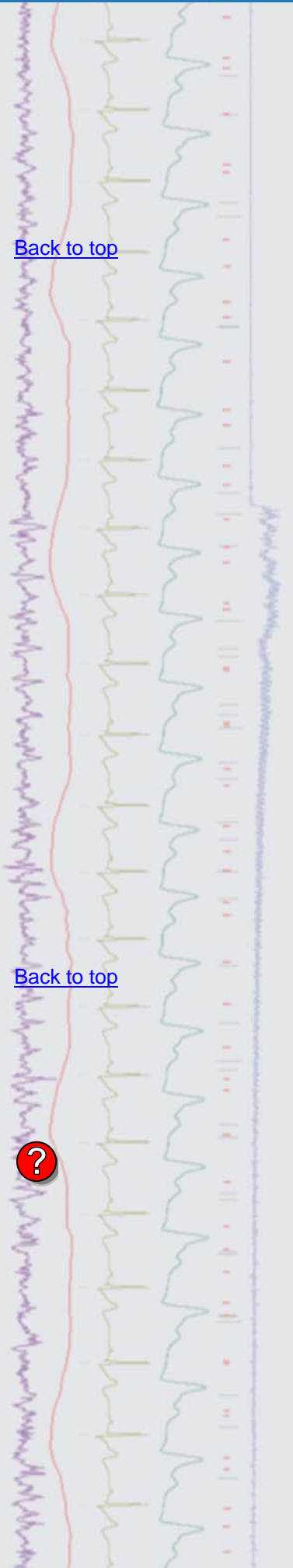
Latest versions of Spike2 and Signal

Updates for Spike2 and Signal are available from the [CED downloads](#) page, or by clicking on the links in the table below. Demonstration versions of the latest software are also available.

Spike2 downloads	Signal downloads
Spike2 version 6.05	Signal version 3.10
Spike2 version 5.19	Signal version 2.16
Spike2 demo	Signal demo

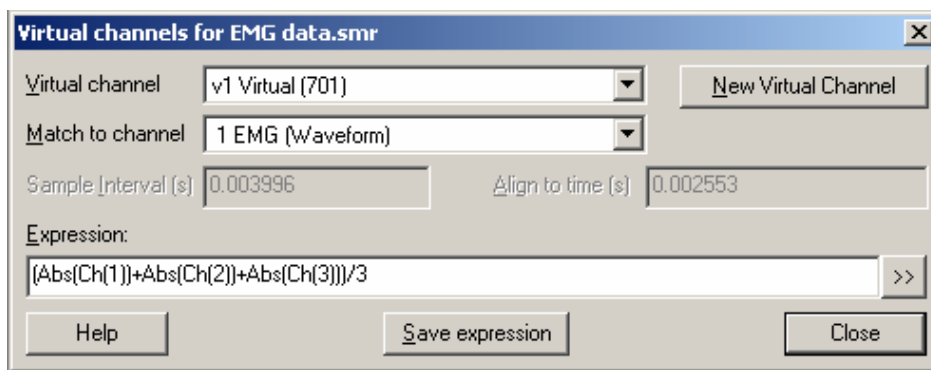
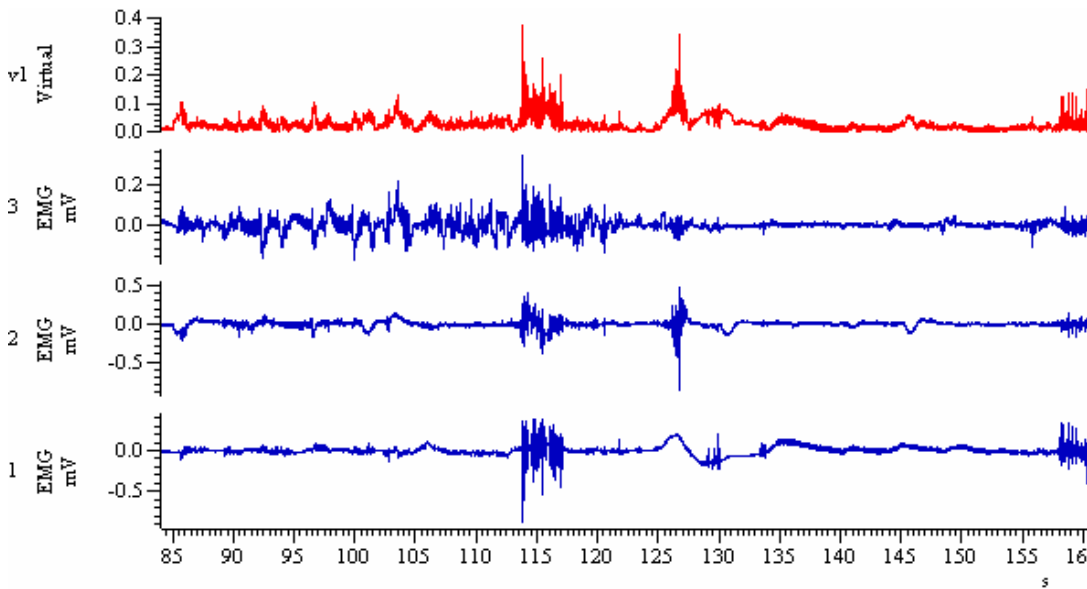


- Q. I am recording three channels of EMG activity from the jaw and would like to calculate the mean of the rectified EMG activity from this data.
- A. You can create arithmetic combinations of channels in Spike2 using the Virtual channel functions from the Analysis menu. Virtual channels are based on expressions which can be a combination of channel values (in the form of Ch(*n*) where *n* is a channel number) and standard arithmetic functions. To create a channel holding the mean of the rectified EMG activity in this example we can use the expression $(\text{Abs}(\text{Ch}(1)) + \text{Abs}(\text{Ch}(2)) + \text{Abs}(\text{Ch}(3))) / 3$, where the Abs() function returns the absolute value (rectification) of each channel. We can match the virtual channel sample interval to one of our existing channels from the Match to channel drop-down list in the dialog.



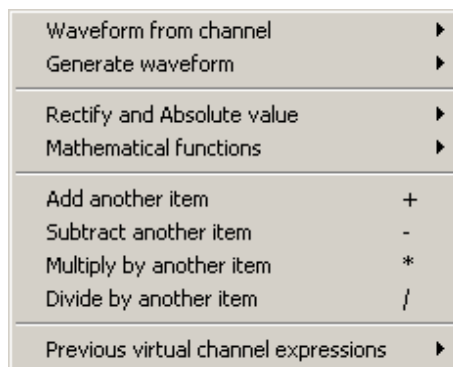
[Back to top](#)

[Back to top](#)



Virtual channel dialog and mean of rectified channel data displayed in channel v1

You can generate your own equations or re-use previously entered expressions by clicking on the double arrow button to the right of the expression field and selecting options from the dialog below. For further information see the virtual channels section in the on-line help.



Expression options

Signal

- Q. I am interested in your 3304 constant current stimulator and would like to know if the settings could be controlled directly from Signal.
- A. The CED 3304 is an isolated current stimulator that can be directly controlled by Signal as an auxiliary states device. If you select support for the 3304 during installation of Signal you can access a configuration dialog for the stimulator from within the States tab of the sampling configuration. The current magnitude range setting needs to be set to match the rotary switch position on the front panel of the 3304 unit. You can then control the current intensity from the set-up dialog and assign different settings to multiple state outputs for use during your

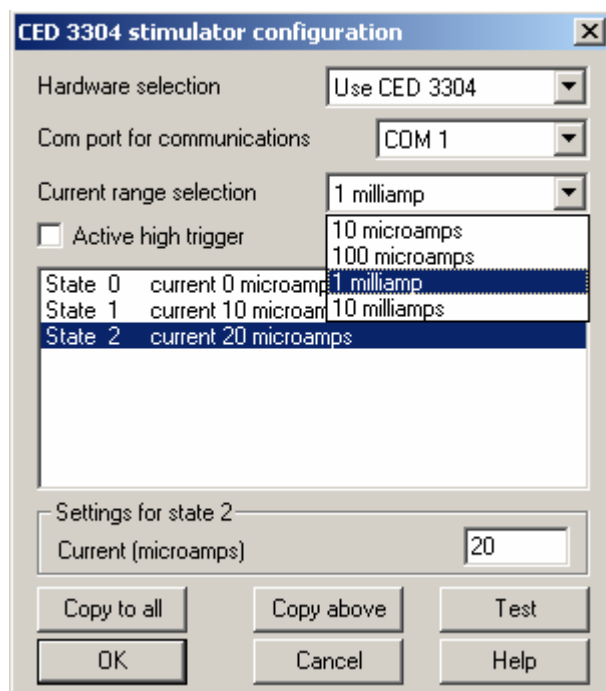
[Back to top](#)



experiment. These stimulus parameters are automatically saved in the sampled frame as variables that can be accessed by the script language.



CED 3304 constant current stimulator



CED 3304 stimulator configuration

Scripts: **Spike2** 

- Q. Is there a script available that would allow me to create a new data file from two separate files, either by copying channels or amalgamating data from one to the end of another?
- A. The attached script, `MergeFiles.s2s`, can be used to merge files by copying channels from a source file to a destination file using a shared timebase or append one file to the end of another. The user is prompted for the files to open when the script is run and can select whether to merge or append from a dialog in the script.

Scripts: **Signal** 

- Q. I have a series of evoked response data files recorded over a long trial period and saved in a common directory. What I would like to do is create auto-averages for each file based on n frames per average and then amalgamate all of these auto-average results in a single file. It would also be important to know which frames in the amalgamated average file related to which data file. Is there any way to achieve this?
- A. The attached script, `BatchAutoAverage.sgs`, is a batch processing example script that creates auto-averages from every data file in a nominated directory. It creates a new memory view that amalgamates all of the frames from the auto-averages from each data file. Each frame in the new memory view has an associated frame comment holding the name of the source data file and which source frames were used to create the average.



[Back to top](#)

Right-click the script icon and save to disk.

If you have any problems opening the embedded scripts in this newsletter please let us know.

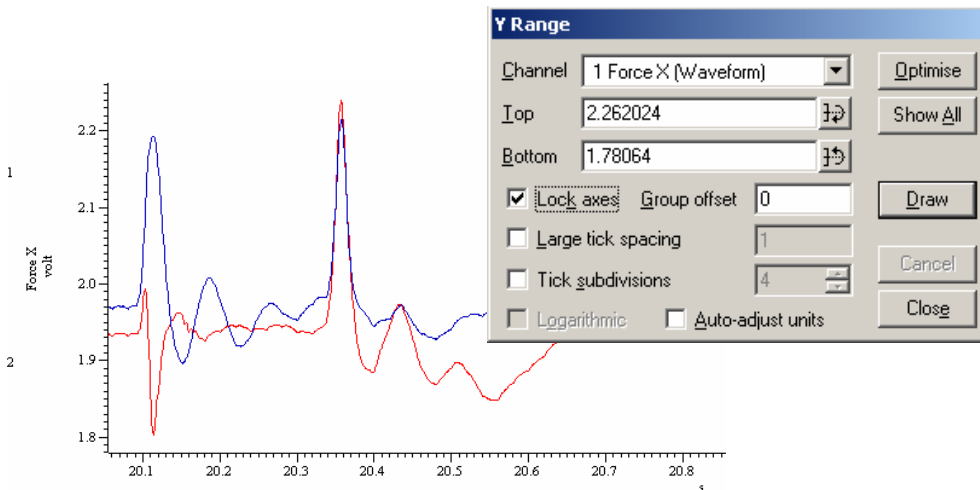
[Back to top](#)

Right-click the script icon and save to disk.

If you have any problems opening the embedded scripts in this newsletter please let us know.

Did you know...?

You can overdraw channels by dragging and dropping channel numbers on top of each other in a Spike2 and Signal file. These groups of overdrawn channels can then share a common Y-axis with an optional offset using the Lock axes checkbox in the Y Range dialog.



X and Y force measurement channels overlaid and sharing a common Y axis

Recent questions

- Q. Am I able to run Spike2 on an Intel Mac running Parallels virtualization software?
- A. Both Spike2 and Signal will run on an Intel Mac which has Windows XP installed using Apple's own BootCamp software (see eNewsletter 27) or Parallels desktop for Mac software by SWsoft. Using BootCamp, Windows XP is installed as a separate operating system that can be selected at start-up to run in place of Mac OS X. The Parallels desktop software runs both OS X and Windows XP in separate "virtual machines", effectively running both operating systems at once. More information on these applications can be found on the Apple and SWsoft websites respectively.

Both Spike2 v6 and Signal v4 along with a Power1401 mk II and Micro1401 mkII have been successfully tested for acquisition and analysis using a Mac Mini 1.66GHz Intel Core Duo processor with 512MB of memory.

User group

If you have any comments about the newsletter format and content, or wish to unsubscribe from the mailing list for this newsletter, please notify sales@ced.co.uk.

All Trademarks are acknowledged to be the Trademarks of the registered holders.

[Back to top](#)

[Back to top](#)

[Back to top](#)